Claims

1.
A BIB carton assembly process
comprising the steps of:
wrapping a carton (41) element
around a bag (51) element
and securing these together,
with a locating retention collar (14),
to create a sub-assembly (20),
capable of being flat-packed
for efficient transport or storage.

2.
A BIB carton assembly process of Claim 1,
further comprising the step of:
securing a handle (13)
to sub-assembly (20).

3.
A BIB carton assembly process of Claim 1,
wherein locating retention collar (14),
is integrated with a handle (13) element.

4.
A BIB carton assembly process of Claim 1,
further comprising the steps of:
inflating and/or filling sub-assembly (20),
by supporting collar (14),
to allow bag (51) inflation and/or fill
and attendant surrounding carton (41) configuration;
and completion by closure and sealing
of top (56, 42, 48) and bottom (57, 58) carton flaps.

5.
A BIB carton assembly process of Claim 4,
further comprising the step of:
injecting air into bag (51),
to act as a leak test,
prior to contents fill.

6.
A BIB carton assembly process of Claim 1,
further comprising the step of:
erecting sub-assembly (20)
into a completed pack
after transfer to a remote fill line.

7.
A BIB carton assembly process of Claim 1,
further comprising the step of:
erecting sub-assembly (20)
into a completed pack
at a local fill line.

8.
A BIB carton assembly process of Claim 1,
further comprising the step of:
erecting sub-assembly (20)
into a completed pack
preparatory to filling.

9.
A BIB carton assembly process of Claim 1,
further comprising the steps of:
erecting sub-assembly (20),
by selective holding and folding
of carton (41) flaps;
sealing top (56, 42, 48) and bottom (57, 58) carton flaps; and
inflating and/or filling bag (51).

10.
A BIB carton assembly process,
substantially as hereinbefore described,
with reference to, and as shown in,
the accompanying drawings.

11.
A BIB carton assembly machine,
with wrap means to wrap a carton (41) element
around a bag (51) element
and secure these together,
with a locating retention collar (14),
to create a sub-assembly (20).

12.
A BIB carton assembly machine of Claim 11,
with securing means to
secure a handle (13)
onto sub-assembly (20).

13.
A BIB carton assembly machine of Claim 11,
with collar fitting means to fit an integrated
locating retention collar (14),
and handle (13) element.

14.
A BIB carton assembly machine of Claim 11,
with further means to
inflate and/or fill sub-assembly (20),
by supporting collar (14),
and allowing bag (51) inflation and/or fill
and attendant surrounding carton (41) configuration;
and means to close and seal
top (56, 42, 48) and bottom (57, 58) carton flaps.

15.
A BIB carton assembly machine of Claim 14,
with further means to
inject air into bag (51),
to act as a leak test,
prior to contents fill.

16.
A BIB carton
produced by the process or machinery
of any preceding Claim.

17.
A BIB carton of Claim 16,
with carton (11) and bag (12) elements
mutually juxtaposed and entrained
preparatory to bag (12) contents fill.

18.
A BIB carton of Claim 16
comprising
a pre-fabricated handle.

19.
A BIB carton of Claim 16
further comprising
a deformable cushion floor
able to withstand crushing, collapse and
failure upon dropping.

20.
A BIB carton of Claim 16
further comprising
a bracing liner or sleeve.

21.
A BIB carton of Claim 16
further comprising
top and bottom end stacking plates.

22.
A BIB carton of Claim 16
further comprising
an air cushion bag.

23.
A BIB carton of Claim 16
further comprising
a carton collar recess
to facilitate a pressure release valve effect
upon carton drop.

24.
A BIB carton of Claim 16
comprising
an integrated neck collar and handle moulding.

25.
A BIB carton of Claim 16
wherein the carton is constructed
from plastics sheet material.

26.
A BIB carton of Claim 25
with integrated moulded collar section.

27.
A BIB carton assembly process
comprising the steps of:
erecting a carton element
with a profiled opening,
inserting a collar element
with attached bag element
into said opening,
such that the bag
is disposed inside the carton
and the collar secures
the bag and carton elements together.

28.
A BIB carton assembly process of Claim 27,
wherein the collar
is integrated with the bag.

29.
A BIB carton assembly process of Claim 27,
wherein bag and collar elements
are attached in a pre-assembly step.

30.
A BIB carton of Claim 22
wherein the air cushion bag
is attached to the contents bag element.

31.
A BIB carton of Claim 22
wherein the air cushion bag
is inflated prior to insertion into carton.

32.
A BIB assembly process
comprising the steps of
inserting a collapsed or collapse-folded bag
through an aperture in a carton wall
of a substantially pre-assembled carton
and inflating the bag when therewithin.

33.
A BIB assembly process
comprising the steps of
pre-assembling a carton,
presenting a collapsed bag
with bag neck entrained mounting collar
into juxtaposition with a carton wall aperture,
inserting the entire bag into the carton enclosure
except for a protruding or retractable bag neck
fitting the collar, by snap-action location and capture,
with the peripheral edge of the aperture

34.
A BIB carton
with an impact releasable capture mounting
between bag neck and carton aperture,
configured for release of bag from carton confines
upon external carton impact,
to allow dissipation or release of impact energy
by bag re-emergence from the aperture
without bag rupture or contents release.

35.
A BIB assembly
for a BIB carton
with a contents bag
and impact cushion bag
juxtaposed with a contents bag within a carton
and filled with a compressible fluid
for energy dissipation, deflection or relief
upon carton impact.

36.
A BIB assembly
for a BIB carton
with a plurality of mixed bags,
some for contents fill
others pre-filled with cushion fluid,
in a co-operative juxtaposition.

37.
A BIB assembly
of multiple clustered bags
in a common carton,
with respective or shared bag necks
protruding through individual or shared apertures
in a carton wall
and captured by discrete or share mounting collars
operative between bag neck and carton wall.

38.
A BIB assembly machine
with means for inserting a collapsed bag
into an aperture in a pre-formed carton box
and fitting an entrained collar by snap-action location and capture,
with the peripheral edge of the aperture.